

Remarks/Arguments

With reference to the Office Action mailed February 27, 2003, Applicants offer the following remarks and argument.

Status of the Claims

Claims 1 to 20 were originally presented for examination. All of the claims were subject to a restriction requirement, with Claims 1, 4, 7-8, 10, 13, and 16-17 deemed to be directed to Species I, and Claims 1-3, 5-6, 9-12, 14-15, and 18-20 deemed to be directed to Species II.

Applicants have elected to pursue the invention of Species II and have canceled Claims 4, 7-8, 10, 13, and 16-17.

Applicants have also added new claims 21-24.

The claims now pending are claims 1-3, 5-6, 9-12, 14-15, and 18-24.

Election

Applicants hereby elect the claims of Species II, being claims 1-3, 5-6, 9-12, 14-15, 18-24.

Discussion

In the interest of expediting prosecution Applicants have canceled Claims 4, 7-8, 10, 13, and 16-17, and have added claims 21-24. Claims 21-24 are directed to the "imager component" of claim 18 further characterizing such items as the base plane structure (as a ground plane), and the characterization of lead array as being below the ground plane.

Specifically, newly added claim 21 is directed to an imager component comprising a printed circuit board, an imager integrated circuit chip, and an optically transmissive material deposited on the imager integrated circuit chip. The printed circuit board is characterized by multiple routing layers, with a plurality of bond leads and a plurality of package leads, where at least one of the multiple routing layers is a ground-plane, and at least one of the plurality of bond leads is coupled to at least one of the plurality of package leads. The imager integrated circuit chip is characterized as being coupled to the printed circuit board and to the at least one of the plurality of bond leads. The optically transmissive material deposited on the imager integrated circuit chip and cured to protect the imager integrated circuit chip from an external environment.

Claim 22, dependent on claim 21, is directed to the physical relationship of the imager integrated circuit chip and the printed circuit board. The newly added claim recites a retaining structure disposed on the printed circuit board around the imager integrated circuit chip. The retaining structure and the printed circuit board form a recess in which the imager integrated circuit chip is mated to the printed circuit board. The imager integrated circuit chip is embedded in an optically transmissive material deposited on the imager integrated circuit chip. This optically transmissive material is characterized as being formed of a filler material deposited on the imager integrated circuit chip and in the recess in the printed circuit board.

Electrically, claim 23 characterizes certain EM aspects of the package, with at least one of the plurality of package leads comprising a second plurality of package leads arranged in an array, and claim 24 characterizes the package leads as arrayed beneath the ground plane so as to route the electrical signal to reduce capacitive or inductive interference.

Conclusion

Based on the above discussion, it is respectfully submitted that the pending claims describe an invention that is properly allowable to the Applicants.

If any issues remain unresolved despite the present amendment, the Examiner is requested to telephone Applicants' Attorney at the telephone number shown below to arrange for a telephonic interview before issuing another Office Action.

Applicants would like to take this opportunity to thank the Examiner for a thorough and competent examination and for courtesies extended to Applicants' Attorney.

Respectfully Submitted,

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